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## **Canadian Science Advisory Secretariat (CSAS)**

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### **Proceedings of the National Peer-Review on Euthanasia Techniques for Small and Large Cetaceans**

**June 23 and June 26, 2014  
Teleconference**

**Chairperson and Editor:  
Christine Abraham**

Fisheries and Oceans Canada  
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## Foreword

The purpose of these Proceedings is to document the activities and key discussions of the meeting. The Proceedings may include research recommendations, uncertainties, and the rationale for decisions made during the meeting. Proceedings may also document when data, analyses or interpretations were reviewed and rejected on scientific grounds, including the reason(s) for rejection. As such, interpretations and opinions presented in this report individually may be factually incorrect or misleading, but are included to record as faithfully as possible what was considered at the meeting. No statements are to be taken as reflecting the conclusions of the meeting unless they are clearly identified as such. Moreover, further review may result in a change of conclusions where additional information was identified as relevant to the topics being considered, but not available in the timeframe of the meeting. In the rare case when there are formal dissenting views, these are also archived as Annexes to the Proceedings.

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### *Aussi disponible en français :*

MPO. 2015. Compte rendu de l'examen par les pairs au sujet des techniques d'euthanasie pour les grands et les petits cétacés; le 23 et le 26 juin 2014. Secr. can. de consult. sci. du MPO, Compte rendu 2014/046

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## SUMMARY

Fisheries and Oceans Canada (DFO) is responsible for the protection, conservation and management of marine mammals. There are occasions when the euthanasia of a small or large cetacean is the only option that DFO can take in dealing with severely injured or sick animals that have no chance of survival. In cases where it is determined that nothing else can be done for such an animal, DFO needs to have a consistent approach and statement on that approach that is backed by Science. The Department currently has no national guidelines concerning the euthanasia of cetaceans. There is therefore a need for advice with regard to when and how such situations should be handled.

Without advice to build guidelines on proper methods of euthanasia for different species, there is a risk that the method chosen to euthanize an animal will exacerbate the pain and suffering sustained by individual animals.

The development of guidelines on euthanasia, based on science advice, will also ensure that responders are prepared to collect biological data that can be used to further our understanding of the species involved and the threats to those species. This will fulfill DFO's goal to move towards an ecosystem approach to resource management.

The main objective of this review is to develop guidelines related to the decision making process and actions to be taken with regard to cetacean euthanasia; specifically, to identify the circumstances under which euthanasia is appropriate; and to identify the options and related methodology used to undertake species-specific euthanasia. This advice will also be used to develop an exemption under the *Species at Risk Act* for those circumstances when euthanasia of a SARA species is necessary.

The meeting was held via two teleconferences on June 23 and 26, 2014. Participants included DFO Science, Ecosystems and Fisheries Management, and external experts from the University of Prince Edward Island, University of Saskatchewan, Vancouver Aquarium, and Woods Hole Oceanographic Institution. A Research Document, Science Advisory Report and these Proceedings resulted from the meetings.

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## SOMMAIRE

Pêches et Océans Canada (MPO) est responsable de la protection, de la conservation et de la gestion des mammifères marins. Il arrive que l'euthanasie d'un cétacé, grand ou petit, soit la seule option qui s'offre au MPO pour traiter des animaux gravement blessés ou malades qui n'ont aucune chance de survie. Lorsque l'on détermine qu'il n'y a plus rien à faire pour un de ces animaux, le MPO doit avoir établi une approche uniforme et avoir fait une déclaration sur cette approche fondée sur les preuves scientifiques. Le Ministère ne dispose actuellement d'aucune directive nationale concernant l'euthanasie des cétacés. Un avis est donc nécessaire, pour savoir quand et comment aborder ces situations.

Sans un avis pour élaborer des directives sur les méthodes appropriées d'euthanasie pour les différentes espèces, la méthode choisie pour euthanasier un animal risque d'aggraver sa douleur et sa souffrance.

L'élaboration des directives sur l'euthanasie basées sur des avis scientifiques, les intervenants seront préparés à recueillir des données biologiques pouvant aider à mieux comprendre les espèces concernées et les menaces pesant sur celles-ci. Cela permettra d'atteindre l'objectif du MPO qui consiste à adopter une approche écosystémique en matière de la gestion des ressources.

Le principal objectif du présent examen est d'élaborer des recommandations sur le processus décisionnel et les mesures à prendre en ce qui concerne l'euthanasie des cétacés; plus précisément, il faut définir les conditions dans lesquelles l'euthanasie est appropriée, ainsi que les options et la méthode correspondante à appliquer pour pratiquer des euthanasies en fonction de l'espèce en question. Cet avis servira aussi à préparer une exception en vertu de la *Loi sur les espèces en péril* dans les cas où l'euthanasie d'une espèce visée par la LEP s'avère nécessaire.

La réunion a eu lieu par l'entremise de deux téléconférences tenues les 23 et 26 juin 2014. Les participants comprenaient des employés du Secteur des sciences et du Secteur de la gestion des écosystèmes et des pêches du MPO, de même que des experts externes de l'Université de l'Île-du-Prince-Édouard, de l'Université de la Saskatchewan, de l'Aquarium de Vancouver et de la Woods Hole Oceanographic Institution. Ces réunions ont mené à la création d'un document de recherche, d'un avis scientifique et du présent compte rendu.

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## **EUTHANASIA TECHNIQUES FOR SMALL AND LARGE CETACEANS**

### **(Pierre-Yves Daoust and Arthur Ortenburger)**

**Rapporteur:** Christine Abraham

**Discussion:** There was some concern raised regarding the use of pentobarbital and whether there is a threat of the drug leaching into groundwater. The authors replied that there is very little data on this. It was suggested that the authors add that the use of pentobarbital should be a method of last resort for animals that are to be buried on-site. Also, it was suggested that animals euthanized with pentobarbital be incinerated whenever possible.

The committee suggested the authors add a paragraph stating that animals euthanized with chemicals should not be consumed.

The committee suggested the authors define "deeply sedated".

There was some concern that conventional firearms should be used on whales less than 5m in length; to be more conservative, it was suggested that the authors suggest use of conventional firearms on whales <6m in length.

The committee also suggested the authors add more context regarding the challenges when dealing with sperm whale euthanasia.

There was some discussion regarding drug dosing and the suggestion to reduce doses; the authors replied that the use of drug scaling is the only appropriate method, and therefore they would rather not reduce the doses recommended.

It was noted that peripheral blood vessels can be very difficult to find for beached whales; the committee suggested that the front flipper or tail would be a more appropriate injection site especially for smaller animals.

The committee suggested that the authors highlight the painkilling properties of Xylazine and Detomidine.

The committee suggested that the authors remove the recommendation for use of 00-buckshot for whales <2m in length.

In Table 5, it was suggested that numbers should be based on metabolic scaling for adult humpbacks.

It was suggested the authors revise Figure 7a to more accurately represent the ventral side of the animal.



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## **APPENDIX 1: TERMS OF REFERENCE**

### **ADVICE ON EUTHANASIA TECHNIQUES FOR SMALL AND LARGE CETACEANS**

**National Peer-Review - National Capital Region**

**June 23 and June 26, 2014**

**Teleconference/Webex**

Chairperson: Christine Abraham

#### **Context**

Injured cetaceans receive national/international media attention, especially for species that are listed under the *Species at Risk Act* (SARA). Currently, it is difficult for the Department to permit euthanasia if the species is listed under SARA and the SARA prohibitions apply. The Department requires a consistent approach where humane euthanasia of cetaceans may be necessary to deal with severely injured or sick animals that have little to no chance of survival. Cetaceans affected are often Species at Risk, and special considerations must be provided to allow for these animals to be legally euthanized under SARA.

#### **Objectives**

The main objective is to use the advice to develop guidelines related to the decision making process and actions to be taken with regard to cetacean euthanasia; specifically, to identify the circumstances under which euthanasia is appropriate; and to identify the options and related methodology used to undertake species-specific euthanasia. This advice will also be used to develop an exemption under the *Species at Risk Act* for those circumstances when euthanasia is necessary.

#### **Expected Publications**

- Science Advisory Report(s)
- Research Document(s)
- Proceedings

#### **Participation**

- Fisheries and Oceans Canada (DFO) (Ecosystems and Oceans Science, Ecosystems and Fisheries Management sectors)
- Academia / Academics

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## APPENDIX 2: LIST OF PARTICIPANTS

Abraham, Christine	DFO Science
Cattet, Marc	University of Saskatchewan
Daoust, Pierre-Yves	University of PEI
Haulena, Martin	Vancouver Aquarium
Kristmanson, Jim	Canadian Science Advisory Secretariat
Landry, Melissa	DFO Ecosystems and Fisheries Management
Measures, Lena	DFO Science
Moore, Michael	Woods Hole Oceanographic Institution
Nielsen, Ole	DFO Science
Ortenburger, Art	University of PEI
Stenson, Garry	DFO Science